

MARBEF data management



Register of Resources web page: a major information system within the network.

**By Ward Appeltans
& Edward Vanden Berghe**

DATA MANAGEMENT IS PART OF MARBEF Work Package 1 'Integrating Activities' and is one of the horizontal layers that cuts across all other activities within the network. Complete integration of research and information, the *raison d'être* of the network, is an essential step to achieving our goal.

The MARBEF data management team is located at the Marine Data and Information Centre at the Flanders Marine Institute (VLIZ) and is led by Dr Edward Vanden Berghe. VLIZ employs four junior staff members, two of whom work on a part-time basis. Biologists Ward Appeltans, Daphne Cuvelier and Simon Claus, and IT'er Bart Vanhoorne, are responsible for carrying out several tasks within the data management.

The website is now fully operational (see note on website, page 7, to find out how to add information to it). The forum and information database (the web-based register of resources) are developed and online. The database will include contact details, organisations, literature, projects, datasets and research infrastructure of institutions in Europe that are related to marine biodiversity research.

A metadata database describing who has done and who is doing what will be made. The information of BIOMARE, Natura 2000, passed and planned surveys, cruises and sampling campaigns are going to be incorporated into one datasystem. This system will be strongly connected with other international organisations such as ICES and EUROCEAN.

A European OBIS node, EurOBIS, is going to be built and led by VLIZ. The input of biogeographic information can, if chosen, happen on remote locations via distributed datasystems, and the array of databases will be queriable through a single search engine. A questionnaire is online to make an inventory of existing datasets of species' distributions. We expect everyone to join this activity, and everyone should inform us of their data in order that we can start organising the building of remote providers. MARBEF addresses and has the power to tackle the questions of what occurs where, when and why. However, if we want to get the overall picture, we need to

integrate, not only more data, but also the data we already have.

An updated version of ERMS will serve as the taxonomic backbone of the project. ERMS 2.0 will also be the standard European list for initiatives like ENBI and Fauna Europaea. ERMS 2.0 will also contribute to URMO, GBIF and ITIS and in this respect will be globally visible.

Instead of one general data management workshop, a session took place at each research theme kick-off workshop to discuss the various data management needs within the network. One report combining the different outcomes of the data management workshops will be distributed via the website.

VLIZ plans to have a more technical workshop to discuss and prepare EurOBIS, to proceed on taxonomic unison and to set standards for data formats and exchange protocols. More information will be available on the website.

The network also needs, as stated in the contract, a "plan for using and disseminating the knowledge." There must be an agreement on data delivery, storage and exchange within the network and the making public of data. An e-conference on this data policy will be organised and should be led by the project coordinators and our WP leaders, together with the data management team at VLIZ.



Two websites central to the MARBEF project: OBIS, BIOMARE

The data management team has also been in contact with other international networks such as Marine Genomics, Fauna Europaea and ENBI. These meetings are helping to further synchronise efforts within Europe.

Of relevance to MARBEF, an International Conference on Marine Biodiversity Data Management: Ocean Biodiversity Informatics (OBI) will be organised by VLIZ, IODE/IOC, ICES, CoML/OBIS and IABO in Hamburg, from 29 November 2004 until 1 December 2004. More information is available on <http://www.vliz.be/obi/>. ●

**Ward Appeltans and
Edward Vanden Berghe,**

Flanders Marine Institute (VLIZ)
Vismijn, Pakhuizen 45-52, B-8400
Oostende, Belgium.
info@marbef.org and wardvdb@vliz.be

Glossary

BIOMARE: Implementation and networking of large-scale long-term marine biodiversity research in Europe:-

<http://www.biomareweb.org/>.

CoML: Census of Marine Life:-

<http://www.coml.org/coml.htm>.

ENBI: European Network for Biodiversity Information:- <http://www.enbi.info/>.

ERMS: European Register of Marine Species:- <http://erms.biol.soton.ac.uk/>

and searchable version on VLIZ site:- <http://www.vliz.be/vmdcdata/erms/index.php>.

EUROCEAN: European Centre for Information on Marine Science and Technology:- <http://www.eurocean.org/> and

Fauna Europaea:- <http://www.faunaeur.org/>.

GBIF: Global Biodiversity Information Facility:- <http://www.gbif.org/>.

IABO: International Association of Biological Oceanography:-

<http://www.iabo.org/index.html>.

ICES: International Council for the Exploration of the Sea:- <http://www.ices.dk/>.

IODE/IOC: International Oceanographic Data and Information Exchange/ Intergovernmental Oceanographic Commission of UNESCO:- <http://iode.org/>.

ITIS: Integrated Taxonomic Information System:- <http://www.itis.usda.gov/index.html>.

Marine Genomics Europe, FP6 EU Network of Excellence:- <http://www.sb-roscoff.fr/marine-genomics-europe/>.

Natura 2000: A European ecological network:- <http://europa.eu.int/comm/environment/life/life/natura2000.htm>.

OBIS: Ocean Biogeographic Information System:- <http://www.iobis.org>.

URMO: Unesco-IOC Register of Marine Organisms:- <http://www2.eti.uva.nl/database/urmo/default.html>.



Updating, expanding ERMS, the European Register of Marine Species



By Geoff Boxshall

IN THE DESCRIPTION OF WORK, MARBEF is committed to updating and revising ERMS. The MARBEF data management group at VLIZ have invested manpower in converting it from static pages into a searchable, relational database structure. This is already available on the VLIZ website: <http://www.vliz.be/vmdcdata/erms/>.

ERMS 2.0 is already evolving into a different entity. Particular taxon groupings such as FishBase, AlgaeBase and CLEMAM are going their own way, and hyperlinks seem the way forwards for updating these groups, but there will be a core MARBEF team led by Mark Costello to take forwards the development of ERMS 2.0. This team already includes several



partners (especially EcoServe, VLIZ, MNHN, FishBase) but numerous other MARBEF partners may become involved.

Mark Costello, Edward Vanden Berghe, Chris Emblow and Daphne Cuvelier at VLIZ are in the process of compiling a list of providers who have agreed to revise their contributions. In parallel with this list, a gap analysis is being undertaken which will generate a list of taxa for which new contributors are needed.

The revision will entail checking and updating all scientific names; removing newly-recognised synonyms; adding new species; checking or providing taxonomic hierarchy; adding geographical distribution data. The aim of including phylogenetic/hierarchy data is to facilitate measures of phylogenetic complexity – a key component of ecosystem complexity. This will, for example, enable the ecologists within MARBEF to more easily identify and quantify differences in the degree of phylogenetic relatedness between high and low species-richness sites.

Contact Mark Costello, Chris Emblow or Edward Vanden Berghe regarding updating ERMS. ●

Geoff Boxshall, Natural History Museum, Cromwell Road, London SW7 5BD, UK.